GEOGRAPHIC NEWS BULLETINS

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VEILED MEN OF THE TUAREG INSPECT A STRANGE "SHIP OF THE DESERT"

One of the ~~Caterpillar~~ tractor cars used by Georges-Marie Haardt on his 15,000-mile journey across Africa in 1925. Similar cars will, this year, carry the members of the Trans-Asiatic Expedition, with which the National Geographic Society is co-operating (See Bulletin No. 1).

HOW TEACHERS MAY OBTAIN THE BULLETINS

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Motor Caravan to Cross Least Known Asia

PLANS for one of the largest and most completely equipped expeditions of modern times were disclosed when Dr. Gilbert Grosvenor, president of the National Geographic Society, announced that The Society will cooperate with Georges-Marie Haardt, of Paris, in sending out eight ~~caterpillar~~ tractor cars, with scientists in a dozen fields, to span 5,000 miles of least-known Asia. The expedition will start from Beyrouth (Beirut), Syria, early in the spring, travel overland to Peiping (Peking) China, and then return across 8,000 miles more of a southern route.

M. Haardt came from Paris to Washington to complete arrangements with The Society to send a representative with the expedition, whose other personnel will be entirely French, and which will have the approval of the French Government and specific missions from France's Ministry of Foreign Affairs.

Leader Has Motored Across Africa

The patron of the expedition in France is Andre Citroën, lifelong friend of M. Haardt, and benefactor of many scientific projects, who also gave his support to M. Haardt's famous expedition which traversed Africa and first crossed the Sahara Desert in motor cars.

The Trans-Asiatic Expedition, with the National Geographic Society cooperating, will take the field in March, the eight ~~caterpillar~~ tractor cars each carrying a trailer. Thirty-five men, including specialists in geography, archeology, ornithology, botany, geology, anthropology and other branches of science, will make up the party.

It plans to start from France's westernmost Asiatic territory, in Syria, traverse Iraq, Persia, Russian Turkestan, Sinkiang, and China, turning south at Peiping for the long trail down to French Indo-China. Thence, from Saigon, it will return through Siam, Burma, India, Baluchistan, Persia and Arabia. In that journey it will traverse areas which have been little visited by Europeans since Marco Polo's time, skirt some of the world's highest mountains, climb lofty plateaus, cross the vast Gobi and Ala Shan deserts, and come upon tribes and racial remnants of ancient Asiatic peoples whose habits and habitats are almost unknown.

Will Make Picture and Sound Records

Two cars will be devoted to the taking of one of the most comprehensive geographic vocal motion picture records ever made. This phase of the expedition is being conducted by Pathé-Natan, Paris. The scenic wonders of innermost Asia, the customs and the costumes of its peoples, will be photographed, both by the black-and-white and the color camera; and native dialects, songs, chants, and rituals will be preserved in sound records.

Each trailer will carry tents, cots, camp chairs, and a camp table for the personnel assigned to its car. One of the cars will be an auto-kitchen, equipped for quick service when the explorers halt for a meal.

The expedition will carry a radio station which at all times will keep it in touch with Paris; and this station will be utilized by the National Geographic Society's representative in sending dispatches to The Society in Washington.

Among the technical studies to be made by members of the expedition will be those dealing with meteorology of areas which now are blank spaces on world weather maps. Magnetic observations will be made. An artist will supplement photographic studies with sketches of ethnographic value.

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CROSSING THE WADI GIR, A SMALL STREAM IN SOUTHERN ALGERIA

Each of the eight ~~caterpillar~~ tractor cars on the Citroën Central African Expedition carried three persons. With its trailer it could provide for its own needs for several days when it became separated from the rest of the party. (See Bulletin No. 1).

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Where the River Shannon Flows—Into Kilowatts!

IRELAND'S river Shannon, famed in song and story, is making a new reputation as a worker. Fifteen months ago a hydroelectric plant began to turn its classic ripples into kilowatts. A recent report indicates that the plant is a most successful commercial venture.

Ireland's Longest Stream

Irish tenors have endeared the Shannon to the hearts of the world, fairy tale writers have used the Shannon Valley as the locale of their stories, and a plentiful supply of salmon and trout has made the river an anglers' paradise. The Shannon is Ireland's longest river. Its silvery stream flows into the Atlantic, and, if a 25-mile canal were dug from its source in Leitrim County to Donegal Bay, Connaught Province, the huge middle western portion of the Emerald Isle would be an island.

The Shannon begins at the so-called Shannon Pot in Leitrim, flows southwestward to the environs of Limerick, and then almost due westward to the Atlantic. Frequently the river widens out into lakes from three to eighteen miles in length. Athlone, home of John McCormack, the Irish tenor, is one of many quaint Irish towns along its banks.

Cascades Defy Oarsmen

A placid river flows under many of the Shannon River bridges so that a traveler must closely follow the river bank to realize its other aspects. From Shannon Pot to the river's mouth, there is a drop of nearly 150 feet. Some of the cascades in its course defy the most intrepid oarsmen.

Once the Shannon was navigable only to Limerick, head of tidewater, 65 miles from the sea. But short canals around the cascades have made it possible for small vessels to reach Lough Allen. Larger canals, such as the Grand and Royal Canals, connect the Shannon with Dublin, and the Ulster Canal connects it with Belfast.

Limerick, the Shannon's most important city, normally has 36,000 inhabitants and ranks next to Cork in population among southern Ireland cities. Limerick street crowds, however, were until recently augmented by some 2,500 German and Irish workmen building the new power plant.

Nearest to America

Because it was nearest America Limerick once had aspirations of being Ireland's greatest port. Shipping, however, drifted to the other side of the island and Limerick methodically operated its flour mills, distilleries, creameries and bacon curing, leather tanning and lace-making factories, and its tobacco factories, featuring fine "Virginia" leaf. The city did not excite the attention of the outside world until the arrival, a few years ago, of men and supplies for the great concrete barrier.

Imagine a smiling but wrinkled "Mother Machree" of one of Ireland's remote, rose-embowered, thatched-roofed cottages flicking an electric switch to light her living room, or plugging in her carpet sweeper; or a happy Irishman, with his clay pipe, sitting before an electrically-operated radio while toasting his toes before an open fireplace near an old fashioned spinning wheel, an Irish cottage fixture. Imagine the streets of the villages that have heretofore been dark after sundown,

Georges-Marie Haardt, leader of the expedition, has been called the "motor car Livingstone of France," because of the amazing expedition he previously led through 15,000 miles of deserts and jungles in Africa. Upon that trip he used caterpillar tractors and automobiles; taking eight months to go from Algeria across the Sahara, around Lake Chad, and through the Belgian Congo to Mozambique.

In the broad scope of its investigations dealing with many fields of science, in the length of its proposed route, aggregating some 13,500 miles, and in the modern aspects of its equipment, utilizing motor transport, natural color photography, the radio, sound recording moving pictures, and various other new devices the expedition is unique—in fact it would not have been possible a few years ago.

Bulletin No. 1, January 19, 1931.

Note: Difficulties and exciting experiences encountered in the course of automobile travel through uncharted deserts and jungles are described in "Through the Deserts and Jungles of Africa by Motor," June, 1926, *National Geographic Magazine*. Some of the regions to be explored by the new Trans-Asiatic Expedition is described in "The World's Greatest Overland Explorer: How Marco Polo Penetrated Farthest Asia," November, 1928, *National Geographic Magazine*, which may be consulted in your school or local library. Other recent articles on Asia in the *National Geographic Magazine* include: "The Glories of Minya Konka," October, 1930; "Working Teak in the Burma Forests," August, 1930; "Desert Road to Turkestan," June, 1929; "By Coolie and Caravan Across Central Asia," October, 1927; "Through the Great River Trenches of Asia," August, 1926.

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SENDING A MESSAGE VIA NATIVE AFRICAN "RADIO"

Georges-Marie Haardt, standing in the center of the picture, is requesting a native operator to send a message on ahead for him. The instrument used is the *goudougoudou*, or signal drum. By means of a code, the natives can relay messages over long distances in a very short time.

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Changes 1930 Brought to Boundaries and Governments

THE world's annual quota of changes in sovereignty among its many states, the arising of new boundary disputes, and the settlement of old ones during 1930 are outlined in a summary by the National Geographic Society.

The most important change in Europe was the evacuation of the German Rhineland by French troops on June 30, five years before the date set in the Treaty of Versailles. Negotiations were undertaken between France and Germany for a similar settlement of the Saar Basin question earlier than 1935, when a plebiscite is provided for, but the conferences broke down without a solution being found.

Rumania changed kings in June, 1930, when Carol, previously divested of his right to the throne, was reinstated and succeeded his minor son, Michael, who was ruling under a regency.

Following a conference in Geneva under the auspices of the League of Nations, between Germany and Lithuania, the latter country agreed to modify governmental machinery and practices in the town of Memel. The city was formerly German, and is now Lithuanian, with the League of Nations exercising a measure of control over port activities.

Because of a dispute between the Bishop of Malta and the Prime Minister of the island government, Great Britain temporarily suspended the Constitution of Malta early in 1930. In the Faeroe Islands, north of Scotland, an unsuccessful independence movement arose in August. The Danish flag was hauled down and a Faeroe flag raised, but Danish control was quickly restored.

Italians Retake Plain of Tripoli

After nearly six months of military operations in the desert, Italian troops in April occupied the Ghat oasis in the edge of the Sahara, and so came into control of the plain of Tripoli. The southern part of the Italian colony of Tripoli had been free from Italian control since troops were removed from the region during the World War.

In Asia the definite steps taken toward raising India to a new status in the British Commonwealth overshadowed in importance numerous other changes. Late in the year, as the London Conference continued, it was proposed that a sort of United States of India be formed, having a dominion status. As a part of the changes in India it was decided by the Conference to recommend that Burma be set up as a separate state, or dominion.

France further clarified the governmental machinery of the Syrian Mandated Territory by publishing in May a new constitution formally providing for a system that has in the main existed experimentally for some time. Under it Syria is to have within it the following entities: The Syrian State; the Sanjak of Alexandretta (a sort of semi-independent part of the Syrian State); the government of Latakia; the government of the Jebel Druze; and the Lebanon State.

A little farther east the troubled condition of affairs that has existed for some years between Iraq and the adjoining Arabian kingdom of Nejd was cleared when the kings of the two countries met in February on a British gunboat in the Persian Gulf and created a permanent joint frontier commission. Kurds of northern Iraq sent a petition to the League of Nations in early autumn asking for independent statehood.

Mt. Ararat in News Again

In June parties of Kurds from Persia crossed into Turkey near Mt. Ararat and raided villages. A Turkish punitive expedition followed the raiders into Persia. In December it was announced that Persia had agreed in principle to the exchange of the Persian portion of Mt. Ararat for a piece of Turkish territory farther south. A Turko-Persian frontier commission is now tracing the new frontier.

When a British company began drilling for petroleum on the Bahrein Islands in October, Persia sent a protest to the League of Nations renewing objections to British control of the isles.

Weihaiwei, tract on the Shantung Peninsula commanding the entrance to the Bay of Chihli, which has been held under lease by Great Britain for the past 32 years, was formally relinquished to China on October 1.

France acquired a new possession when in April a contingent from a French gunboat raised the tricolor over Tempest Island, a tiny islet in the China Sea about 400 miles northeast of Singapore and about 300 miles south of Cochin, China.

Ethiopian (Abyssinian) conditions were changed markedly during the year with the death of the Empress Zauditu and the passage of full powers into the hands of Taffari Makonen, who served as regent. He was crowned emperor on November 2 with the title Haile Selassie I.

A step toward the creation of a new dominion in British East Africa was taken when in June a British "white paper" announced that the post of High Commissioner was to be created

lighted brightly by the pull of a single switch, and the village workshops, now operated by hand, humming with electric machines. These things were made possible when the great network of power wires were stretched across the Irish Free State from the Shannon's power site.

Bulletin No. 2, January 19, 1931.

Note: Irish homes, costumes and industries are described and illustrated with color and black-and-white photographs in "The Hills and Dales of Erin," and "Ireland: the Rock Whence I Was Hewn," *National Geographic Magazine*, March, 1927. See also "The Races of Europe," December, 1928; and "Fearful Famines of the Past," July, 1917.

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AN IRISH CHIMNEY SWEEP SOLICITS BUSINESS

As most houses in southern Ireland have small open-hearth fireplaces, and narrow chimneys produce much soot, the sweep's services are in demand. He uses a long, jointed rod and several sizes of brushes, instead of the traditional goose or chicken, which formerly was supposed to be lowered down the chimney to flap the passage clean.

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Tagging Our Wandering Bird Visitors

BIRD study is no longer confined to field glass excursions to the meadows and woods, or to Saturday afternoon trips to view stuffed specimens in glass cases.

In the last ten years bird banding, in which captured birds are tagged with aluminum rings and set free again, is revolutionizing ornithology. The bands are issued by the United States Bureau of Biological Survey, which supervises all banding work in North America. Each band bears a different number, by the use of which each bird may be studied separately, instead of as a member of a group.

Museum scientists and government specialists are not the only ones taking part in bird banding. At sanctuaries, private and State owned, and in many back yards, amateur ornithologists are capturing and banding birds, setting them free again unharmed to record their own migration and breeding stories.

Cape Cod Sanctuary

From Cape Cod comes a report that the first season of the 600-acre sanctuary, conducted by scientists connected with the Biological Survey, was successful, and many species were banded at this station in the path of the coastal migration route.

E. W. Nelson, formerly chief of the Biological Survey, in a communication to the National Geographic Society, describes the methods of modern bird-banders and the reaction of some of the birds to the banding process:

"Investigators familiar with the bird life of their districts capture the birds, alive and unharmed, with many ingenious traps, and place a numbered aluminum band or ring on the leg of each. Each band bears a central address, so that whenever the bird is retaken, alive or dead, the finder may forward either the band or the number on it.

Birds As Messengers

"The use of birds as messengers by man began in the dim past. Perhaps the earliest record is that of Noah, who is said to have sent out the Raven and the Dove to prospect for land.

"For a time prior to the development of systematic banding, students of bird movements cut the feathers so the bird could be identified. Sometimes they marked the birds with bright colors, or attached a small piece of parchment with a legend to a feather or to a leg. These crude and scattered efforts gave little information.

"At the beginning, most of the birds banded in America were nestlings or parents taken at the nests. The first trap used was the government sparrow trap, devised by the Biological Survey to capture English sparrows. With the growth of bird banding a great variety of small traps, mainly of wire mesh, has been developed.

"Some of these traps are automatic; others are operated with drawstrings by a watcher concealed a short distance away.

"One successful form of wire trap is attached to a tree trunk. The upper and lower ends form hinged doors, which close when a long cord leading to a near-by place of concealment is pulled. These traps, baited with suet, are successful in capturing Nuthatches, Flickers, and numerous kinds of Woodpeckers.

"Experience has proved that the trapping, handling, and banding of birds neither harms nor seriously alarms them. In fact, a bird-trapping and banding station may be beneficial to birds, and serve as the direct cause of a local increase in their numbers. The supply of food continually renewed at the traps and the con-

with wide powers of supervision over Kenya, Uganda and Tanganyika territories. The Commissioner is to be assisted by a nominated council which will form a unifying link.

In Morocco France extended her control of outlying regions in the Atlas Mountains.

South American Boundaries

The outstanding boundary settlement in South America was between Paraguay and Bolivia. The "Chaco Question" which led to armed clashes in 1929 was brought to an end in July with the mutual restoration by Bolivia and Paraguay of Forts Boqueron and Vanguardia.

Following ratification of a boundary agreement between Paraguay and Brazil by the congresses of both countries, a joint commission went into the field last summer and placed landmarks along the common frontier between the River Apa and Bahia Negra.

By a treaty signed January 10, 1930, Colombia relinquished in favor of Brazil claim to approximately 25,000 square miles of territory, ending a boundary controversy that had existed since colonial times. A joint Colombian-Venezuelan boundary commission was at work last summer establishing the frontier between Maracaibo and the Goajira Peninsula. At the same time a joint Venezuelan-Brazilian commission was marking out the boundary between those countries in the area east of the Rio Negro and a short distance north of the Equator.

Tacna-Arica Dispute Settled

The long-standing Tacná-Arica dispute between Chile and Peru came to a formal end on August 5, when the two countries ratified the new frontier. Markers had been set along the entire line separating Tacna, Peru, from Arica, Chile.

An important banana-growing district is the subject of dispute between Honduras and Guatemala in Central America along the Caribbean coast. A joint boundary conference is seeking to solve the problem. Another Central American boundary commission was formed during the year by Honduras and Nicaragua.

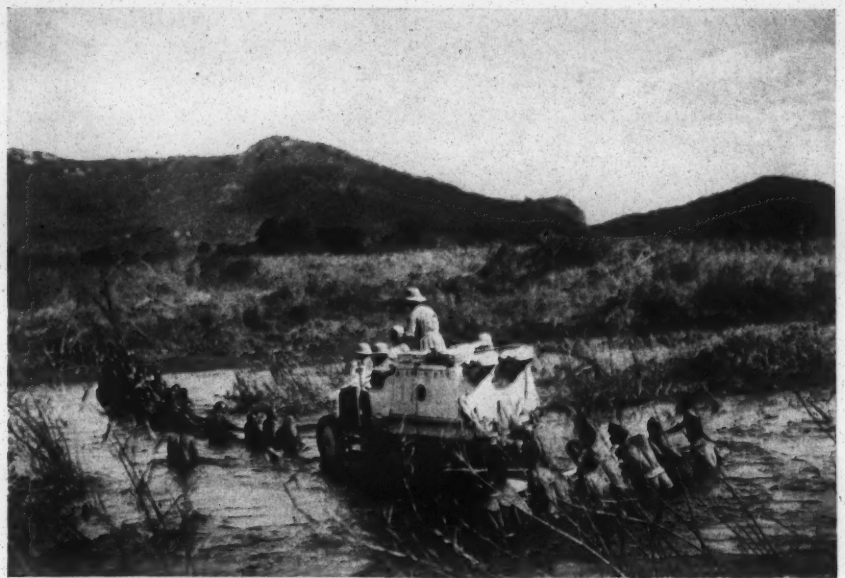
At home, President Hoover on July 21 approved the recommendation of the Mexico-United States Boundary Commission that the Rio Grande River, where it forms the international line below El Paso, Texas, be straightened, transferring equal areas of territory to the two countries. Dikes would be built between El Paso and Fort Quitman, Texas, reducing the river length from 154 to 88 miles.

A convention was signed between the United States and Great Britain fixing the line between the Philippine Archipelago and British North Borneo. The sovereignty of the United States to the Turtle Islands was recognized.

In the Antarctic Riiser-Larsen and Lutzow-Holm of the Norwegian Expedition discovered and mapped new land on February 17, 1930. This was near 71° 26′ S. and 12° W.

In the Arctic Sweden assented to Canada's claim to the Sverdrup Islands, a group of seven barren patches of uninhabited land on the edge of the Arctic Ocean.

Bulletin No. 3, January 19, 1931.



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A PRECARIOUS RIVER CROSSING ON A FERRY MADE OF NATIVE BOATS

A sample of the sort of difficulties which will be encountered by the Trans-Asiatic Expedition, with which the National Geographic Society is co-operating (See Bulletin No. 1).

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Death Valley's Only Industry Dies

WHILE Death Valley's borax mines were still producing there was both life and hope in the subcellar of the Western Hemisphere.

But higher grade borax ore has been discovered in the Kramer District of California, and borax miners have flocked to the new fields. Even the desultory Death Valley Railroad has petitioned the Interstate Commerce Commission to allow it to stop running.

The Death Valley Railroad hasn't any place to go since Ryan, its terminal city in the Valley, once a prosperous mining town, has been deserted.

Death Valley has a sombre fame because of its name, its heat, and the fact that it is the lowest bit of dry land in the United States. The bottom of the Valley, which lies in eastern California, is 276 feet below sea level; and in summer the temperature rises to 130 degrees Fahrenheit in the shade.

Originated Like Dead Sea Area

Death Valley resulted from a terrestrial "sinking spell" tens of thousands of years ago, just as dozens of other valleys in the Great Basin area did, and just as did the world's most famous below sea level area, the Dead Sea region of Palestine. At the time the valley was formed a long, narrow block of earth, not more than a dozen miles wide in this particular locality, broke from its rocky moorings and settled downward, leaving sheer cliffs on each side.

Since that day two important developments have been under way: rains and winds have been cutting the bounding cliffs into rugged, sloping mountainsides; and have been transporting the material to the valley floor. Slowly Death Valley is committing suicide; gradually the floor is being built up; and in time—after the passage of some thousands of years—no part of it will remain below sea level.

In normal years only a few inches of rain fall on the valley floor. But during May, 1930, there were daily showers for more than half the month. Under this stimulus, seeds that must have lain dormant for years sprouted, and large patches of the less salty areas of the valley became carpeted with wild flowers and grasses.

Valley is Being Filled Up

More rain falls on the mountains bounding the valley, the Armagosa Range to the northeast, and the Panamint Range to the southwest. It is the precipitation on these ranges—the eroded remains of the cliffs that at first towered over the valley—that is gradually filling the great sink with debris.

From the valley floor one sees the mouths of numerous canyons, and before each spreads a fan-shaped deposit of sand, salt and stones brought down by freshets. The water that pours out of these canyons after rains in the mountains is usually quickly drunk by the dry sands; or, if it accumulates in the lowest depressions of the valley, it rapidly evaporates in the hot, dry desert air, leaving a deposit of salt.

Approximately 500 square miles lie below sea level is Death Valley. In width, the depression varies between five and twelve miles. From end to end, it extends northwest and southeast for 125 miles, and it lies wholly within California.

The valley usually presents a desolate appearance. The lowest areas are salt flats. Most of the relatively higher portions of the floor have an abundance of salt grains, too, mixed with the sand. Here and there old saline crusts are broken into hard, jagged pieces. In places the sand and salt drift into dunes.

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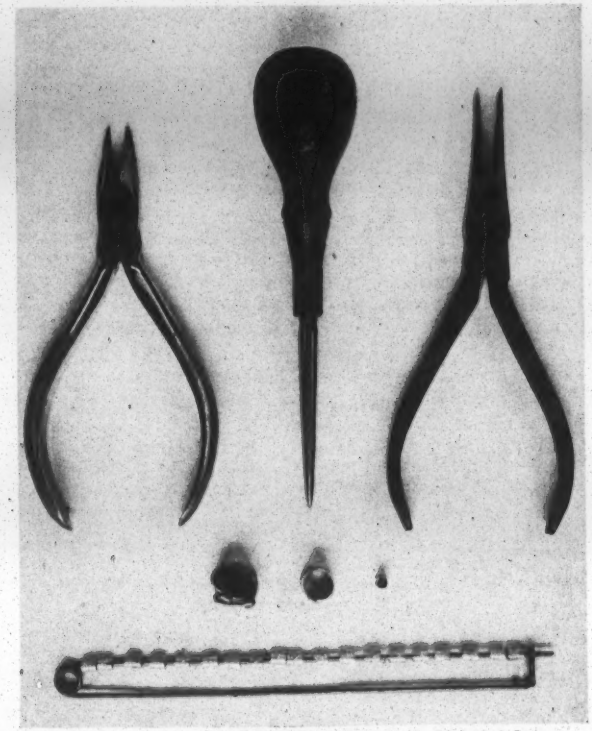
stand guard that is kept against the incursions of cats and other enemies render the vicinity of such stations an effective sanctuary.

"One mental trait appears common to practically all species of birds being trapped. When held in the hand for a short time and then turned on their backs, they usually lie quietly with closed eyes, often for several minutes, on the open palm. Then like a flash they turn and fly off. The various species show a marked difference in the readiness with which they yield to this apparently hypnotic state."

Bulletin No. 4, January 19, 1931.

Note: See also: "Bird Banding, the Telltale of Migratory Flight," *National Geographic Magazine*, January, 1928. For other authoritative articles on birds and bird habits, see "Sindbads of Science," July, 1927; "A Naturalist with MacMillan in the Arctic," March, 1926, and "The Book of Birds, 331 full-color portraits, published by the National Geographic Society.



© Photograph from U. S. Biological Survey

THE BIRD BANDER'S TOOL KIT

Equipment for banding birds includes one of two forms of pliers, a small awl to thrust into and open a band when needed, and a set of serially numbered bands to fit the legs of birds of different sizes. A strong wire, bent into the form of a long, slender safety pin, is very useful for stringing the bands in their numbered sequence, so the next in the series is always available. These bands bear on the outside the words "Notify Biol. Surv." below which is the number. On the inside of the band are the abbreviations "Wash., D. C."

Life in the Desert

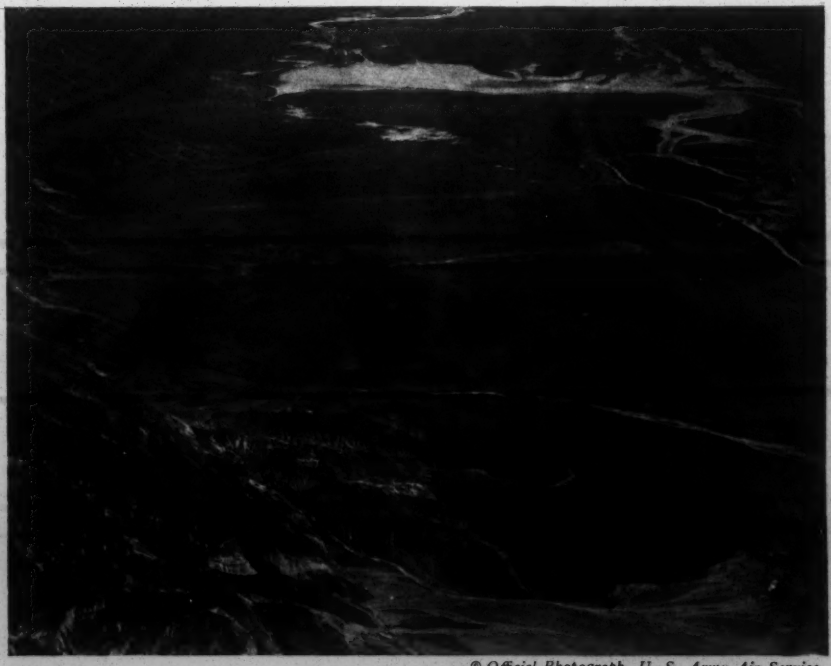
The area is not wholly devoid of life. An occasional stunted mesquite bush manages to exist in the shifting sand. In the autumn and winter and early spring a few horned "toads" and other lizards scamper about; but these animals are wise enough to migrate to more hospitable regions before summer sets in.

From the steep sides of Death Valley a few small, scattered springs of good water trickle. These have been carefully marked. Other springs are so impregnated with minerals that their waters are unfit for use. One sizable spring gushes into the valley. With the aid of its waters small tracts of alfalfa and a number of trees are growing. Near this touch of civilization were the borax mines.

Death Valley gained its doleful title in 1849 when a party of overland travelers bound for California perished in its wastes. Board-marked graves and an occasional human skeleton show that the valley has taken its further toll of life; but with a railway near the southeastern end, wagon and automobile tracks throughout the depression, marked springs, and an irrigated "ranch," Death Valley has necessarily lost some of its sombre reputation.

Bulletin No. 5, January 19, 1931.

Note: Additional airplane views of America's "Sahara" are included in "The Non-Stop Flight Across America," June, 1924, *National Geographic Magazine*. See also: "California, Our Lady of Flowers," and "Ever Changing California," June, 1929.



© *Official Photograph, U. S. Army Air Service*

AS AIRMEN SEE DEATH VALLEY FROM A HEIGHT OF TWO MILES

For total desolation Death Valley, California's famous depression, is without parallel. Black, sun-baked mountains, white "rivers" of sand and salt, and parched plains make it one of the most dismal, and in summer time one of the hottest places on earth. Even at high altitudes airplane pilots can feel the blasts of its furnacelike waves of heat.